



US Army Corps  
of Engineers

## FUSRAP

Formerly  
Utilized Sites  
Remedial  
Action Program

*“Public Health  
and Safety are the  
U.S. Army Corps  
of Engineers’  
Highest Priorities”*

# FACT SHEET

## Definitions

**The Atomic Energy Act** – This 1954 law created the Atomic Energy Commission (AEC), which established the federal system of regulation of certain radioactive materials and facilities related to atomic energy. It later split into the Nuclear Regulatory Commission (NRC) and the Energy and Research and Development Administration (ERDA). ERDA became part of the U.S. Department of Energy (DOE) in 1977. The Atomic Energy Act is also the basis of authority for the U.S. Environmental Protection Agency (EPA) to set cleanup standards for certain radioactive materials defined in the Atomic Energy Act. A major amendment to this law was passed in 1978.

**Alternate Disposal** – Disposal of waste containing residual radioactive material at locations other than a NRC or agreement state licensed disposal facility. This would include permitted hazardous waste disposal facilities and facilities that can reuse the material if they have a permit or license to manage these residual materials.

**Byproduct Material** – There are two definitions for byproduct material in the Atomic Energy Act. Byproduct material is defined as material made radioactive in or by radiation from a nuclear reactor. It also is defined as tailings or wastes produced from ore processed primarily for its uranium or thorium.

**Environmental Protection Agency (EPA)** – There are several laws giving this agency regulatory input to key aspects of the Formerly Utilized Sites Remedial Action Program (FUSRAP). As required by the National Contingency Plan, the EPA provides consultation on the program’s removal and remedial actions at National Priority List (Superfund) sites and is involved throughout the cleanup process. The Resource and Conservation and Recovery Act (RCRA) also gives the EPA responsibility for regulating hazardous waste both on and offsite. The

EPA has established standards for identifying hazardous waste, design requirements for hazardous waste landfills, and treatment standards that must be met before hazardous waste can be properly disposed. EPA regulates mixed waste as well as hazardous waste.

**Formerly Utilized Sites Remedial Action Program (FUSRAP)** – FUSRAP is an environmental cleanup program established in March 1974 by the AEC under the authority of the Atomic Energy Act of 1954. This program was created to identify, investigate and take appropriate cleanup action at sites with radioactive contamination from the nation’s early atomic energy program. Cleanup at formerly utilized sites primarily involves contaminated soil and building debris.

**Hazardous Waste (HW)** – Hazardous wastes are wastes regulated by the EPA under RCRA, or by an authorized state authority. In simple terms, it includes characteristic wastes that are ignitable, corrosive, reactive, or toxic by definition, and listed wastes the EPA or a state has predetermined to regulate as hazardous waste.

**High-Level Radioactive Waste (HLRW)** – This is highly radioactive material resulting from the reprocessing of spent nuclear fuel. It includes liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains materials in concentrations requiring isolation.

**Low-Level Mixed Waste (LLMW)** – This is waste containing low-level radioactive waste and RCRA designated hazardous waste. This means that the waste is regulated by the EPA and possibly state authorities, and is subject to NRC regulations as well.

**Low-Level Radioactive Waste (LLRW)** – Radioactive material that is not high-level radioactive waste, spent nuclear fuel,

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transuranic waste, or byproduct material produced by the extraction or processing of uranium or thorium ore, is classified as low-level radioactive waste by the NRC.

Because this type of waste is defined by what it is not rather than by what it is, the term applies to a broad range of wastes and does not necessarily identify whether or not it is low hazard. This type of waste is not regulated by EPA as hazardous waste. However, it is regulated by the NRC, by state law or interstate agreement. This type of waste does not include naturally occurring material or accelerator produced radioactive material.

**Mixed Waste (MW)** – Materials regulated as hazardous waste under the RCRA; and source, special nuclear, or byproduct material subject to the Atomic Energy Act. If the hazardous portion of the mixed waste is a natural component of the ore or normally results from processing ore (and thus not subject to RCRA), then the material is not a mixed waste. It is only regulated for its radioactive component.

**Naturally Occurring or Accelerator Produced Radioactive Materials (NARM)** – These are radioactive materials not regulated by the NRC. Radioactive ores and technologically enhanced natural radioactive materials are not regulated by the NRC. Materials made radioactive by exposure to a particle accelerator are also not regulated by the NRC. NARM refers to either type of materials. NARM is regulated in some states.

**Naturally Occurring Radioactive Material (NORM)** – These radioactive materials are not governed by the Atomic Energy Act. The material's radioactivity has been enhanced, usually by mineral extraction or processing activities. It does not include the natural radioactivity of rocks and soils or background radiation. This type of material is a subset of NARM.

**Nuclear Regulatory Commission (NRC)** – This is an independent federal regulatory agency created to regulate civilian uses of radioactive material. This agency is responsible for ensuring that radioactive materials are managed with adequate protection of the public's health, safety and the environment. With respect to the FUSRAP,

this commission regulates source, special nuclear, and byproduct materials as defined by the Atomic Energy Act.

**Ore** – Natural elements and metals combined with other types of rock, soil and organic matter that may be mined or treated for the extraction of its useful content or any other matter from which useful material is extracted.

**Resource Conservation and Recovery Act (RCRA)** – This law regulates the management and disposal of hazardous and solid waste as well as mixed waste. The law includes requirements for using manifests to track off-site shipments; requirements for marking and packaging shipments; requirements to meet treatment standards with respect to land disposal restrictions; and requirements for designing treatment, storage, and disposal facilities to be protective of human health and the environment. For non-hazardous solid waste, this law requires states to set standards that non-hazardous waste landfills must meet.

**Solid Waste** – This is any solid, semi-solid, liquid, or contained gaseous materials that is discarded and not excluded from regulations as solid waste.

**Source Material** – Uranium and thorium metals or compounds, or ores containing greater than one-twentieth of a percent of uranium and thorium, a combination of the two in any physical or chemical form are key examples of useful source materials extracted from ore. Source material does not include special nuclear material.

**Special Nuclear Material (SNM)** – In general, this involves weapons grade material or material used for special power generating reactors that can consist of Plutonium, uranium-233, uranium enriched in the isotope 233 or isotope 235 or any material artificially enriched by these, but not including source material. Special nuclear materials also are not considered to be source material.

**Spent Nuclear Fuel (SNF)** – Fuel withdrawn from a nuclear reactor after it has been exposed to radiation, and has undergone at least one year's decay, and has not been chemically separated into its basic elements by reprocessing.